

REMARKS

Claims 1, 3, 5-7, 21-22, 24-26 and 28-33 are pending in this application. By this Amendment, Figures 3-5 and 10 and claims 1, 3, 21, 22, 24, 28, 32 and 33 are amended, and claims 23 and 27 are canceled without prejudice or disclaimer.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because the amendments: a) place the application in condition for allowance for the reasons set forth below; b) do not raise any new reasons that require further search and/or consideration; and c) place the application in better form for an appeal, should an appeal be necessary. More specifically, the above amendment to independent claims 1 and 24 relate to logic values of input data signals. Similar features have been recited in previous claims 3, 23, 27 and 28, for example, and thus no new consideration is necessary. The amendments to the figures are based on requirements of the Office Action and to correct a typographical error in Fig. 10. Thus, no further search and/or consideration is necessary by the Examiner. Entry is proper under 37 C.F.R. §1.116.

The Office Action indicates that Figures 3-5 should be designated as --Prior Art--. Applicant maintains that there has been no admission that these figures constitute prior art and the Patent Office has not provided any basis in which to show that these figures are prior art. However, in order to further prosecution, Figures 3-5 are labeled as --Related Art-- to be consistent with the labeling of Figures 1-2 and with the description set forth in the specification.

The Office Action rejects claims 1, 3, 5-7 and 21-33 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Based on the above amendments to independent claims 1 and 24, each of the independent claims have been

amended to relate to first and second logic values, which were previously recited in the dependent claims. Thus, the Office Action's concerns are moot. The specification clearly supports the amended features. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

The Office Action rejects claims 1, 3, 5, 6, 21-29 and 31-33 under 35 U.S.C. §102(e) by U.S. Patent 6,407,510 to Yoo et al. (hereafter Yoo). The Office Action also rejects claims 1, 3, 5, 6, 23-29 and 31 under 35 U.S.C. §103(a) over U.S. Patent 6,603,449 to Kang et al. (hereafter Kang) in view of U.S. Patent 6,262,699 to Suzuki et al. (hereafter Suzuki). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites generating a single data pulse and applying the single data pulse to an address electrode line where a width of the single data pulse being based on a logic value of an input data signal. Independent claim 1 further recites that if the input data signal has a first logic value then the width of the single data pulse is a first data pulse width and if the input data signal has a second logic value then the width of the single data pulse is a second data pulse width. The first data pulse width is greater than the second data pulse width. Independent claim 1 also recites applying scanning pulses having a pulse width identical to the first data pulse width, wherein the scanning pulses progressively applied to the plurality of scanning/sustain electrode lines are overlapped for a preset time with respect to each other.

Yoo does not teach or suggest at least these features of independent claim 1. That is, Yoo discloses that an address electrode line may receive a main data pulse MDP as well as possibly also receive an auxiliary data pulse ADP (in addition to the main data pulse MDP). See

Yoo's col. 3, lines 48-56. That is, the main data pulse MDP and the auxiliary data pulse ADP are separately and independently generated. Accordingly, as stated in the June 22 response, Yoo's supplying of a main data pulse MDP and an auxiliary data pulse ADP has an increased power consumption as the two pulses MDP and ADP are generated independently.

Because of the separate and independent generation of pulses ADP and MDP, Yoo does not teach or suggest generating a single data pulse and applying the single data pulse to an address electrode line where a width of the single data pulse being based on a logic value of an input data signal. Yoo also does not teach or suggest that if the input data signal has a first logic value then the width of the single data pulse is a first data pulse width and if the input data signal has a second logic value then the width of the single data pulse is a second data pulse width, wherein the first data pulse width is greater than the second data pulse width.

In discussing the rejection based on Kang in view of Suzuki, the Office Action appears to disclose that Kang includes data pulses 41, 42, 45 and 46 in Figure 5 each having different widths. However, Kang's pulses applied to the address electrodes $S_{A1...m}$ shown in Figure 5 do not relate to the generation of a single data pulse and applying the single data pulse to an address electrode line where a width of the single data pulse is being based on a logic value of the input data signal. Kang also does not suggest the features relating to first data pulse width and the second data pulse width. Suzuki does not teach or suggest these features of independent claim 1 missing from Kang.

For at least the reasons set forth above, independent claim 1 defines patentable subject matter.

Independent claim 24 defines patentable subject matter for at least similar reasons. That is, independent claim 24 recites generating and applying a single data pulse to an address electrode line where a width of the single data pulse being based on a logic value of an input data signal. Independent claim 24 further recites that if the input data signal has a first logic value then the width of the single data pulse is a first pulse width and if the input data signal has a second logic value then the width of the single data pulse is a second pulse width, the first pulse width being greater than the second pulse width. Still further, independent claim 24 recites applying scanning pulses having a pulse width substantially identical to the first pulse width, a first one of the scanning pulses applied to a first one of the plurality of scanning/sustain electrode lines being overlapped for a preset time as compared to a second one of the scanning pulses applied to a second one of the plurality of scanning/sustain electrode lines. Yoo, Kang and Suzuki, either alone or in combination, do not teach or suggest these features.

Accordingly, each of independent claims 1 and 24 defines patentable subject matter. Claims 3, 5-7 and 21-23 depend from claim 1 and claims 25, 26 and 28-33 depend from claim 24 and therefore define patentable subject matter at least for this reason. In addition, the dependent claims also recite features that further and independently distinguish over the applied references.

For example, dependent claim 7 recites the plurality of scanning/sustain electrode lines are divided into an upper part and a lower part, and the scanning pulses are progressively applied to the upper part starting from a first scanning/sustain electrode line, and the scanning pulses are progressively applied to the lower part starting from a last scanning/sustain electrode line. See

also dependent claim 31. The Office Action does not reject dependent claim 7 based on Yoo; however, the Office Action does reject dependent claim 31 based on Yoo. However, there is no suggestion for these features in Yoo. Furthermore, the Office Action does not even address the features of claim 31 with respect to Yoo. The Office Action also does not address the features of claims 7 and 31 with respect to Kang. Yoo and Kang (and Suzuki) do not teach or suggest that the scanning pulses are progressively applied to the lower part starting from a last scanning/sustain electrode line as recited in dependent claim 7 (and similarly recited in dependent claim 31). Accordingly, claims 7 and 31 define patentable subject matter at least for these additional reasons.

The Office Action rejects claims 1, 3, 5-7 and 23-31 under the judicially created doctrine of obviousness-type double patenting over claims 1 and 31 of U.S. Patent 6,340,960 to Song et al. (hereafter Song) in view of Kang and further in view of Suzuki. The rejection is respectfully traversed.

Claims 1 and 31 of Song relate to scan pulses. As admitted in the Office Action, Song does not teach or suggest the previously claimed features of "if input data signal exists...each other." However, in the June 22 response, these specific features were specifically argued as not being within the prior art. The Office Action appears to rely on secondary references of Kang and Suzuki in order to find features argued as being patentable. It is improper to make a double patenting rejection over Song's claims when Song fails to claim the specific features of the claim. The Office Action incorrectly relies upon assignee's own patent in order to form a double patenting rejection when assignee's patent (to Song) does not show major features of the claims.

However, in view of the above amendments to independent claims 1 and 24 of the present application, the double patenting rejection should clearly be withdrawn, as Song does not teach or suggest the features of independent claims 1 and 24 of the present application. Even more specifically, Song's claims do not correspond to claims 1 and 24 of the present application.

More specifically, Song's claims relating to scan pulses do not correspond with the pending claims regarding "generating a single data pulse and applying the single data pulse to an address electrode line, a width of the single data pulse being based on a logic value of an input data signal, wherein if the input data signal has a first logic value then the width of the single data pulse is a first data pulse width and if the input data signal has a second logic value then the width of the single data pulse is a second data pulse width, wherein the first data pulse width is greater than the second data pulse width" as recited in claim 1, for example. As such, the present claims are not obvious over Song's claims. Withdrawal of the judicially created doctrine of obviousness-type double patenting is respectfully requested.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3, 5-7, 21-22, 24-26 and 28-33 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **David C. Oren**, at the telephone number listed below.

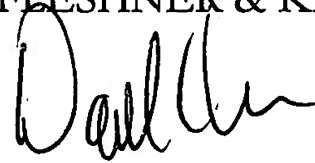
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

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concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and
please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

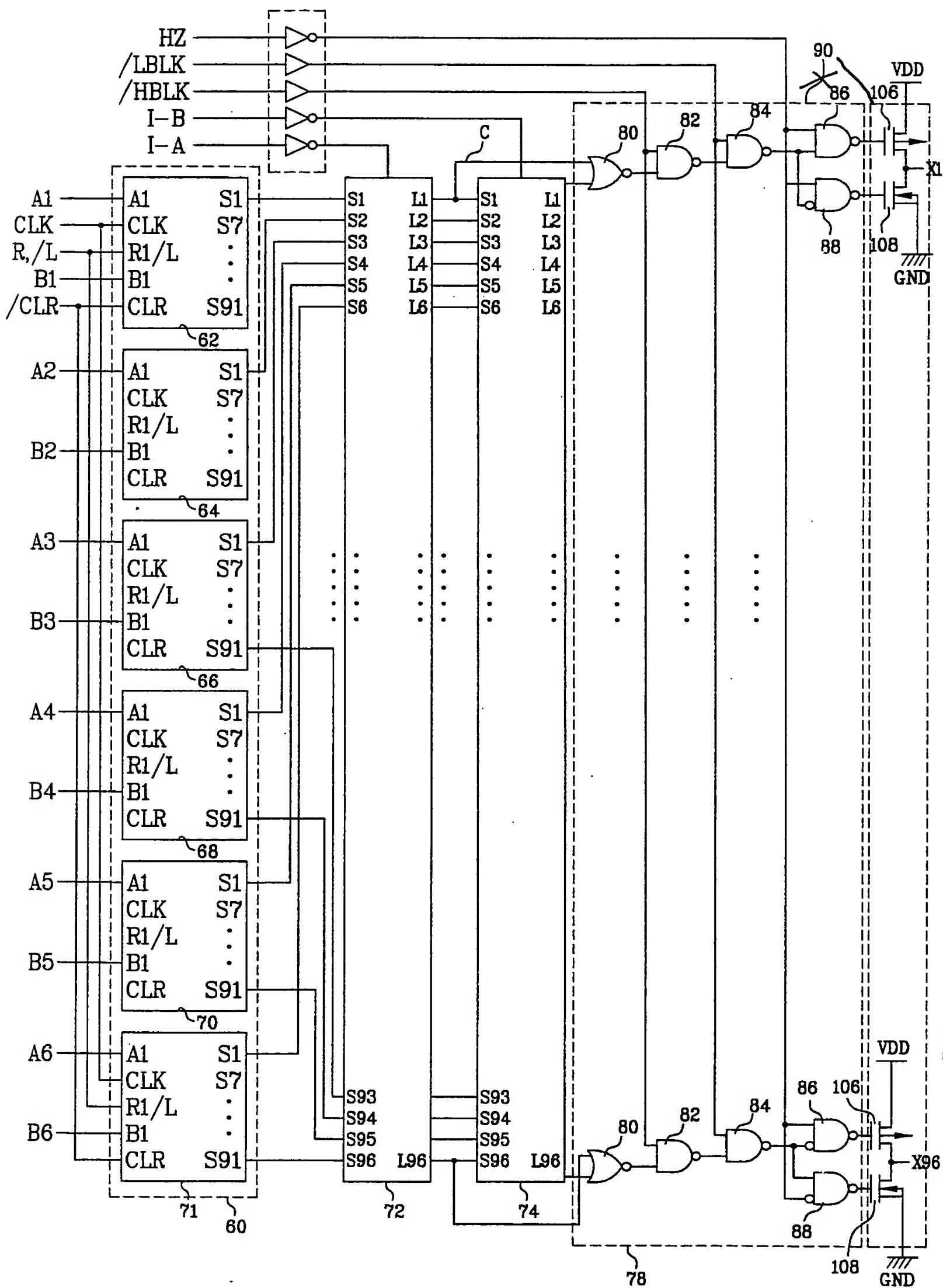


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Attachments:

Replacement Sheets for FIGs. 3-5 and 10
Annotated Sheet of FIG. 10

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